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Contact:

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Re: Responses to Emergency Response Imagery Services Request for Information (RFI) Vendor Questions

Q #1: Are you interested in hosting CASIL, or making CASIL data available via web services?

Yes. But, while we are interested in the service supporting other CASIL (and non-CASIL) datasets, it is not a critical component of this RFI. The primary focus of this RFI is on an Imagery Service pilot project. CASIL imagery data holdings alone may not be sufficient for this imagery application.

Q #2: What data formats do you need to support?

To support general clients we expect support for formats such as Geotiff and Geo JPEG2000.

Q #3: Which thick clients (GIS and CAD software packages) do you envision needing to support, in addition to web access?

To support general clients we expect server application(s) to support OpenGIS Standard Map Services. Special server connectors to specific GIS applications can additionally be proposed.

Q #4: What bandwidth and storage capacity do you plan to have?

We anticipate that a pilot imagery service would include a 10 terabyte corpus of imagery. Bandwidth and general network topology requirements are unknown and can be addressed in the responses.

Q #5: Please describe the CERES architecture.

The California Spatial Information Library, is a service designed to deliver standard California GIS data products through simple http and ftp interfaces. Currently, there are about 2 terabytes (Tb) of statewide data, although CaSIL is

expected to grow to nearly 6 Tb in 2005/2006. Multiple distributed mirrors of the CaSIL data are maintained and synchronized.

The architecture supporting our ArcIMS services is as follows:

Our ArcIMS services at CERES are built upon ESRI's ArcIMS and ArcSDE products running on MS Windows operating systems. ArcSDE is running on top of MS SQL Server 2000. In terms of the web server environment, this system utilizes IIS with ASP, ASP.NET and Tomcat installed on our production system, and the same plus Perl installed on our development and testing systems.

Currently, this configuration primarily supports our California Digital Atlas application. It also is used to provide web mapping services for other applications—some of which are still under development. In terms of custom web-clients, CERES uses two for these services. One is based on Active Server Pages and is a product, and a second, related version uses ASP.NET. Both rely upon the ArcIMS ActiveX connector as the underlying API.

In addition, The CERES and UC Davis (UCD) CaSIL server provides web mapping services. These services include OpenGIS WMS based geospatial browsers, ArcIMS based browsers, and specialized interfaces, such as:

- CERES GeoFinder (<http://casil.ucdavis.edu/cgi-bin/gb/geofinder>) - provides an intuitive means for users to browse geometries from a gazetteer, as well as find features that intersect with the currently selected feature. For instance, users are able to browse Watersheds from within GeoFinder throughout its various subdivisions, such as hydrologic region, hydrologic unit, etc.
- California Military Land Use Compatibility Analyst - <http://sample1.casil.ucdavis.edu/Calmap8> - a mapping and reporting tool that enables project applicants to determine whether or not their proposed project location affects military activities in a given vicinity. Users first zoom to the area of interest in a map interface, then plot their project location on the map. The user can then generate a custom, printable report that enables her to clearly see how the project location intersects with military activities, such as being under special use air space, etc.

Q #6: Can you provide us with some idea of organizational sponsorship under which this project would take shape? I.e., will the State of California's CIO and/or GIO have any participation/sponsorship?

The Office of the GIO (temporarily under the auspices of the California Resources Agency) will take the lead on this project. The State CIO supports the goals of this RFI and may sponsor an Imagery Service pilot project. If a GIO is selected between now and the distribution of an RFP/RFQ for a pilot project, and

the project were to proceed, the project would come under the Office of the CIO (the GIO position is proposed as a Deputy CIO position).

Q #7: Are any other State organizations currently involved or interested in involvement/cooperation? If so, can you provide a tentative list?

The Department of Conservation, the Department of Water Resources and Governor's Office of Emergency Services have expressed an interest in participating in the development of a multi-purpose imagery service. Others (including local and federal governments) may choose to participate if this RFI results in a follow-on RFP for a pilot project

Q #8: In general, what is the current characterization of GIS Application Program Interfaces (APIs) within potential users/stakeholders of an imagery emergency response system within the State of California? Open? Proprietary? Mixed?

We can only comment on the state of California State Government GIS APIs. State agencies have mixed APIs. For example, the CERES Program, which hosts the California Spatial Information Library, has both an ArcIMS and an OpenGIS Web Map Service (WMS) - using Mapsurfer. Other agencies are using Intergraph and MapInfo in addition to a very large installed base of ESRI products.

Q #9: Are there any targeted parameters as to "how much data" (all available layers, etc.) would be provided in "what amount of time" in order to adequately respond to an emergency?

We are most interested in a Web Service for Imagery. Again, while having access to other layers would be useful, the goal of an Imagery Service pilot project would be to provide fast browsing of imagery, and fast upload and download of processed and unprocessed imagery. At a minimum, initially the imagery service pilot project needs to be able to provide access (both browsing and upload & download) to approximately 2 terabytes of 1-meter, color Digital Orthophoto Quarter Quads (DOQQs) for California and approximately 1 terabyte of color, one-third-meter urban area imagery (NGA/USGS acquisitions). We have not developed "performance metrics" for what constitutes "(an) amount of time . . . to adequately respond to an emergency" for this potential pilot project. These sorts of metrics would require analyses well beyond the scope of the RFI.

Q #10: Does the state wish to receive proposals for pilot projects incorporated within our response to this RFI – Or will there be a subsequent RFP for "pilot projects" after the information submitted can be fully evaluated and considered by the state?

Assuming we are able to proceed, there will be a follow-on RFP to this RFI.

Q #11: Regarding the goals for the pilot project:

Is it relatively more important for the state to:

- i. Have a “proof-of-concept” to demonstrate capabilities of imagery services to meet emergency management needs**
- ii. Implement an operational system for some geographic or functional subset of capabilities**
- iii. Gain knowledge about the capabilities, strengths, and limitations of various solutions available for imagery services for emergency management**
- iv. Gain first-hand knowledge about what skills and resources are required to manage and operate secure, scalable, 24/7, imagery services to support emergency management.**
- v. Build-out a subset of state-operated infrastructure for imagery services.**

We are most interested in “iii. Gain knowledge...” with this RFI. However, all of the above are of interest to us and would presumably be clarified as a result of a follow-on RFP and pilot project.

Q #12: Does the state anticipate having any funding available to help offset the costs (e.g. hardware, software, hosting services, consulting/training services) for implementing the imagery services pilot project?

We do not anticipate having significant resources in the near-term to initiate a broader implementation of an imagery services pilot project. However, we continue to search for funding through grants and potential redirection of resources. The information gathered as a result of this RFI will be useful in helping us “market” the need for such a service and, perhaps, obtain funding for a pilot.

Q #13: Does the state have resources to dedicate to administration of various system security mechanisms (e.g. authentication of user access requests, enrolling users, monitoring system resource usage), and will the state also dedicate time for training of personnel for this function?

Yes. We will certainly do these things should we pursue a pilot project and understand that these needs must be addressed in the deployment and operation of a production system.

Q #14: Within what time frame does the state anticipate conducting the imagery services pilot projects?

Assuming we proceed beyond this RFI process, we anticipate the pilot project(s) lasting approximately 12 to 18 months

Q #15: Will this RFI provide information that will be used in formulation of the state's Homeland Security grant funding applications?

We may use information gained through this RFI process to help the State formulate content for Homeland Security and other grant proposals.

Q #16: If the pilot project successfully demonstrates the value and a sufficient business case for imagery services, does the state anticipate that it will seek approval for a statewide implementation of these services?

Yes. Although we can't predict whether the proposal would be "statewide."